



## What Is It?

"MagicEye" images are technically called "random dot autostereograms." Stereo means solid or 3-dimensional, but you don't need special glasses to get the full effect of these magical posters. Instead, you create the illusion yourself (auto = self) by focusing in a plane beyond the 2-dimensional poster. As you master the viewing technique, hidden objects "arise" from the 2-D display, gain 3-D realism, and appear to float in space!

The earliest computer-generated MagicEye images were created in 1979. The 3-D illusion occurs when your eyes focus on two different repetitions of the pattern. Our MagicEye posters let you experience 3-D images of genetics-related subjects: the base pairing of A-T and C-G, a sea of [metaphase](#) chromosomes, and the twisting ladder of the [DNA double helix](#).

## How Does It Work?



The instructions from "MagicEye" explain how to experience the hidden 3-D images in these colorful displays. For those who need a hint, each display is accompanied by a second file showing what the hidden image looks like. Viewers are instructed to examine the images in a well-lighted area where you won't be interrupted.

Hold the center of the printed image near your face, close enough that it looks blurry. Then focus as if you were looking through the image to see something in the distance. Move the image slowly away from your face until you perceive its depth and 3-D quality, then take time to examine the "hidden" image. As you stare at it, the optical illusion becomes more realistic and gains depth when the page is farther from your face.

These images will portray full 3D effect on a computer screen, or when printed on a regular color printer.

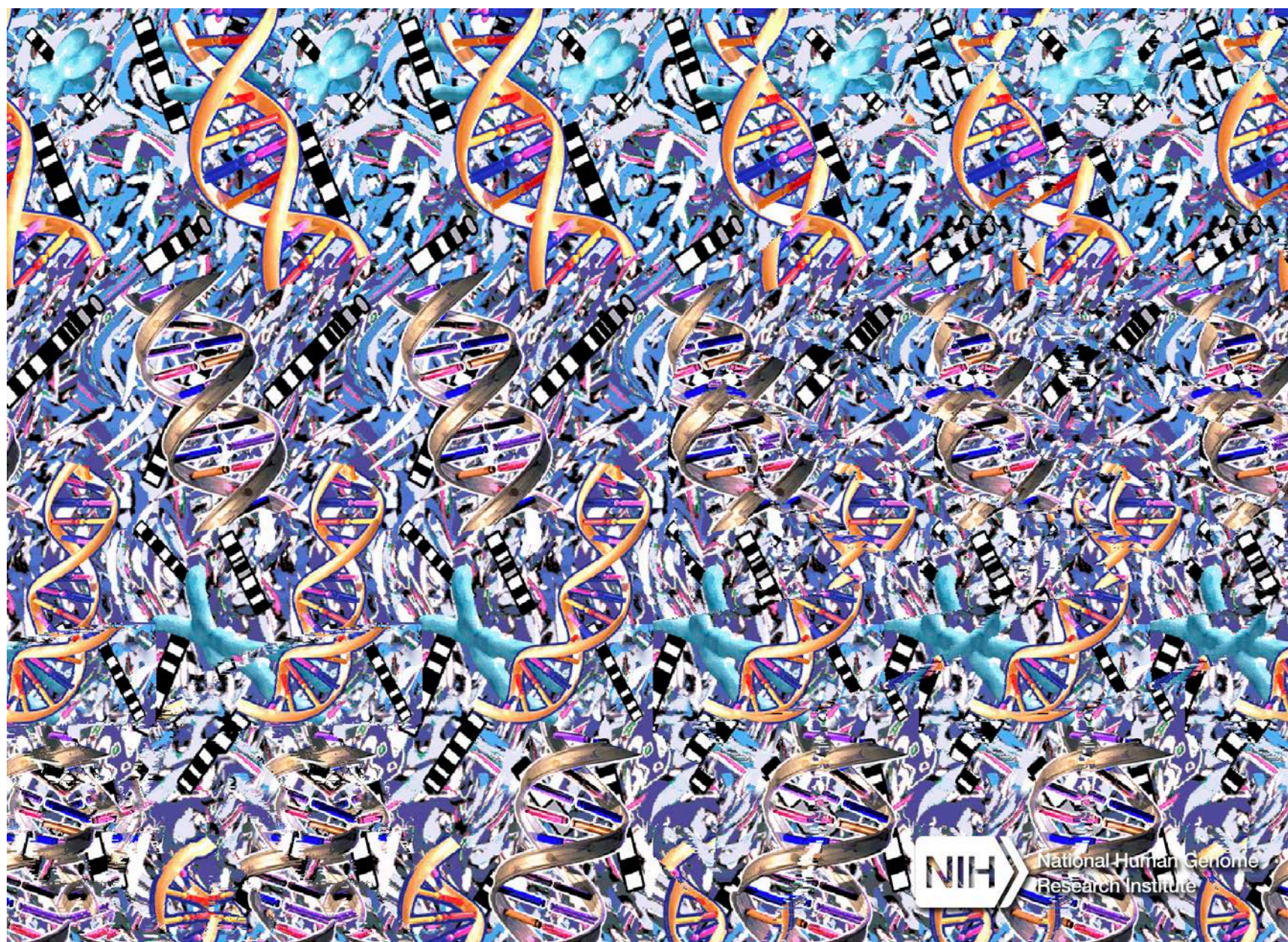


## Why Is This Important To Me?

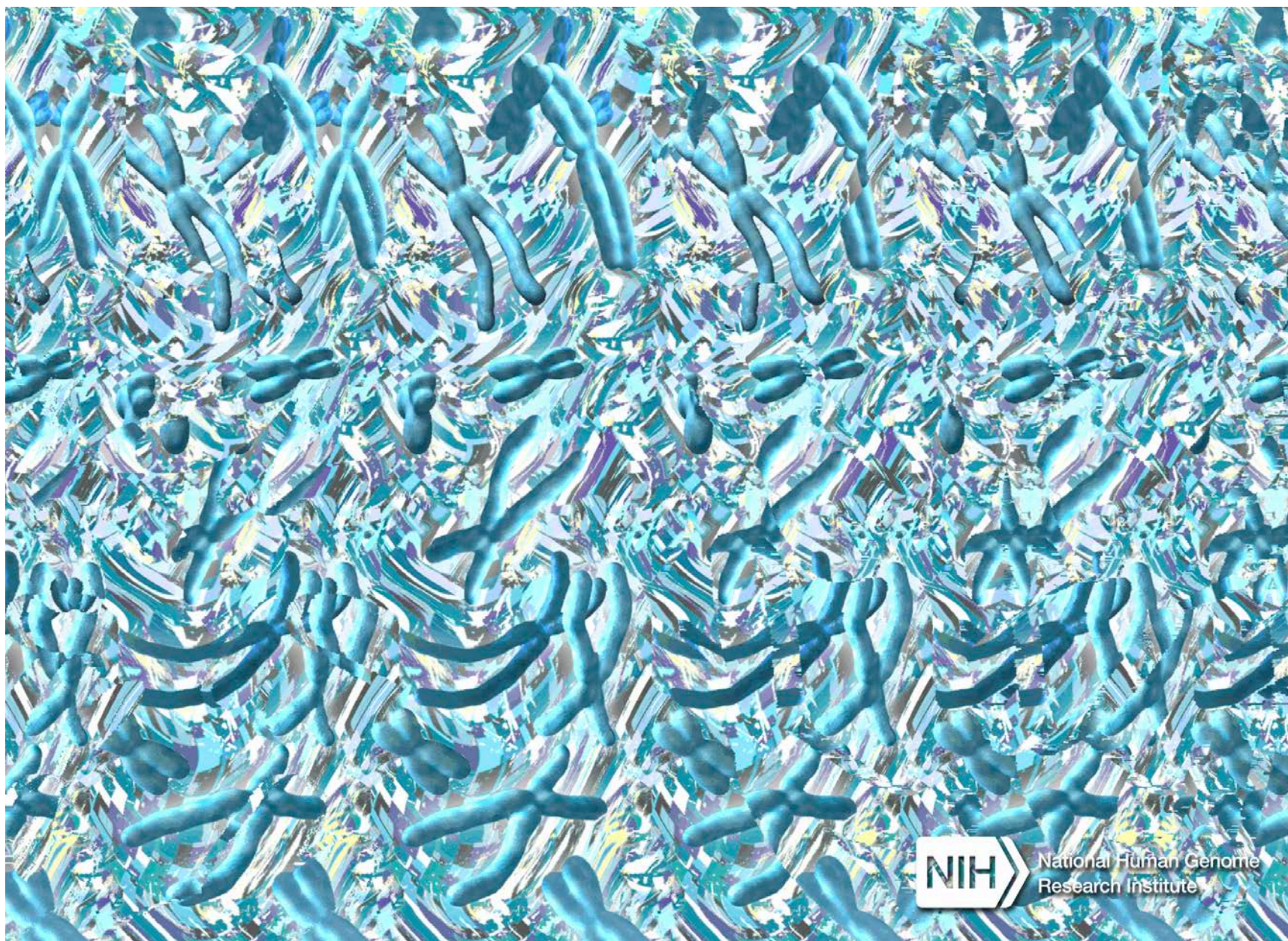
The three basic images in this exercise are found in many genetics resources: paired bases, [metaphase](#) chromosomes, and the [double helix](#). These 3-D views of foundational genetics learning are accurately illustrated and especially appealing to visual learners. As students learn how these 3-D illusions are created (<http://www.magiceye.com/faq.htm>), they begin to see that imagination, creativity, and art are very important in communicating about science.

Besides ... sometimes in the struggle to cover all the science standards, it's easy to forget that a few more "Aha!" moments are a great way to capture students' interest and attention: Which image will your students remember 10 years from now – a classic textbook drawing of [DNA](#), or the hidden 3-D image of DNA revealed by MagicEye?



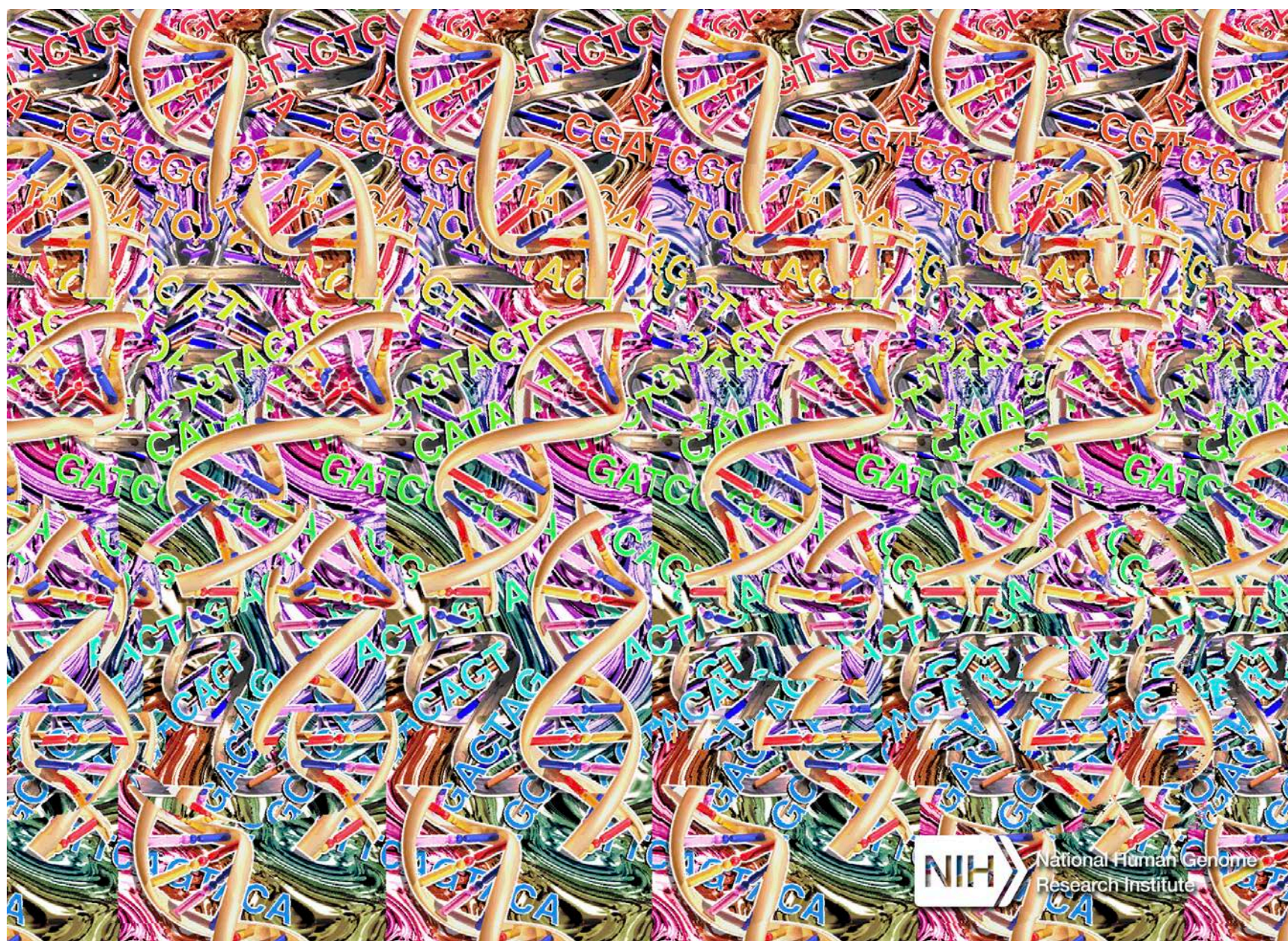






National Human Genome  
Research Institute

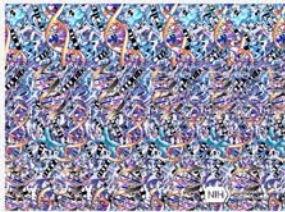




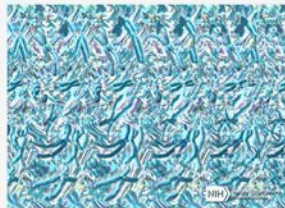


Teacher's code sheet to the underlying  
images in the MagicEye illustrations from  
Unlocking Life's Code.

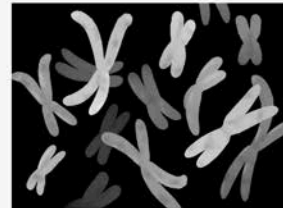
(<https://unlockinglifescode.org>)



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